3. Provide evidence of the program's effectiveness in increasing student achievement.

The theoretical and empirical rationale of EdSolutions, Inc.(ESI) extended day program design reside in four research constructs: **Out of School Time, Class Size, Reading Instruction**, and **Mathematics Instruction.**

1. Out of School Time

Research—Research supports that time for learning should be redesigned to use time more effectively.[1] Recent research suggests that providing after school programs involving extended learning opportunities is one of the methods that makes certain students are not left behind in reading achievement.[2]

EdSolutions Program Design—ESI was founded on the premise that time after school should be used for improvement of reading and math skills rather than simply decompression and recreation. Our programs are grounded in the philosophical and empirical premise that time used effectively after school has a direct positive impact on student achievement.

2. Class Size

Research— A substantial body of research has emerged in the past two decades on the effect of class size on learning. The research supports a commonly held view that as the class size approaches a 1:1 teacher to student ratio there is an increase in student learning.[3] Also, researchers from the same source noted that smaller class size alone does not achieve increased results unless there is a corresponding change in the instructional strategy of the teacher.

EdSolutions Program Design—Our programs are designed for small group tutorial instruction with a 1:6 teacher to student ratio. We design programs to decrease the student to teacher ratio and provide teacher training to support changes in the instructional environment.

3. Reading Instruction

Research—Structuring the after school environment requires a knowledge of the best practices of reading instruction. The National Reading Panel reviewed the importance of phonics, phonemic instruction, fluency, comprehension, and vocabulary instruction and found that there were significant practices that led to improved achievement. Most notable is the finding that teaching children to manipulate phonemes is highly effective under a variety of teaching conditions.[4] Also, fluency instruction is best achieved by guided oral reading, and comprehension is most effective if

[1] Prisoners of Time (1994). Report of the National Education Commission on Time and Learning.
[2] Bringing Education to After School Programs (1999). U.S. Department of Education
[3] Reducing Class Size, What Do We Know (March 1999). U.S. Department of Education
[4] Report of the National Reading Panel, December 2000.
[5] Armstrong, S.W. (1983) The effects of material difficulty upon learning disabled children's oral reading and reading comprehension. Learning Disability Quarterly, 6, 339-348. Brenitz, Z. (1987). Increasing first graders' reading accuracy and comprehension by accelerating their reading rates. Journal of Educational Psychology, 79 (3), 236-242.
[6] Allington, R. (1983). Fluency: The neglected reading goal. The Reading Teacher, 36, 556-561.
Read Naturally. (2001). Masters Edition Teachers Manual. Saint Paul, MN: author.
[7] What Research Says About Mathematical Problem Solving (online: www.just4kids.com)

combinations of techniques are used. The panel found that both direct and indirect methods should be used for teaching vocabulary.

EdSolutions Program Design—Our programs consist of small group teacher-directed sessions in reading. Small groups involve no more than five students per certified teacher. The EdSolutions program uses the research-based program Read Naturally™ which emphasizes reading fluency and comprehension. Research by Armstrong and Brenitz[5] demonstrates a strong correlation between fluency and reading comprehension, and Allington[6] finds that students become fluent readers by reading. Our certified teachers are trained to implement the Read Naturally™ method of teacher modeling, repeated reading, and progress monitoring. Teachers provide direct instruction on phonics skills, model reading with the use of audio tapes and read aloud strategies, and frequent monitoring to identify improved reading rates. To meet each child's needs, the EdSolutions program is formed by diagnostic assessments conducted during the initial two weeks of the program.

4. Mathematics Instruction

Research— The principles published by the National Council of Teachers of Mathematics (NCTM) encourages students to manipulate real objects as they learn concepts of number and operations, data analysis and probability, geometry, measurement, problem solving, algebra, reasoning and proof, communication, connections, and representation. Because typical elementary students are concrete learners, math lessons incorporate real objects, investigations, problem solving and experimentation to allow students to practice and apply new mathematical skills and concepts[7].

EdSolutions Program Design—Our program consists of small group, teacher-directed sessions in math. Small groups consist of no more than five students per certified teacher. An EdSolutions mathematics program is designed to focus on learning standards and to use manipulatives to teach abstract concepts. EdSolutions utilizes effective published mathematics curriculum that have demonstrated proven results. In addition, EdSolutions instructional consultants develop teaching strategies linked with manipulatives instruction to focus on specific learning standards requested by the LEA.

[5] Armstrong, S.W. (1983) The effects of material difficulty upon learning disabled children's oral reading and reading comprehension. Learning Disability Quarterly, 6, 339-348. Brenitz, Z. (1987). Increasing first graders' reading accuracy and comprehension by accelerating their reading rates. Journal of Educational Psychology, 79 (3), 236-242.
[6] Allington, R. (1983). Fluency: The neglected reading goal. The Reading Teacher, 36, 556-561.
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Record of Effectiveness

Students who participate in EdSolutions programs have consistently realized positive academic achievement gains. EdSolutions designed and managed two 21st Century Community Learning Programs during the 2001-2002 academic school year. These programs served disadvantaged students who characteristically scored in the lowest two quartiles on nationally norm referenced tests. Student performance on state norm referenced tests demonstrated that students increased their achievement levels. For example, in Morehouse Parish, students who scored at or above the 50th percentile on the state criterion referenced test increased from 6% in 2001 to 24% in 2002. Norm referenced tests (ITBS) reading scores demonstrated similar increases: for example, in 2001 less than 1% of the students scored at or above the 50th percentile on the reading test, but in 2002, 8% of the students were able to score at or above the 50th percentile. Math scores on the ITBS for students attending the extended day program demonstrated even greater gains: 7% of the students scored at or above the 50th percentile in 2001, but 24% scored at or above the 50th percentile in 2002. In a similar trend, achievement scores for another 21st program in Darlington, South Carolina showed that students were maintaining proficiency at grade level.

In addition to achievement scores, the U.S. DOE Annual Performance Report requires qualitative data relative to teacher self disclosure of the performance of students during the academic school year. Teachers in Morehouse Parish found that students who attended the EdSolutions extended day program made the following improvements: 93% in class attendance, 84% in homework completion, and 80% in class behavior. Also, students who attended the EdSolutions extended day program in Darlington, SC, made the following improvements: 96% in class attendance, 93% in homework completion, and 73% in class behavior.